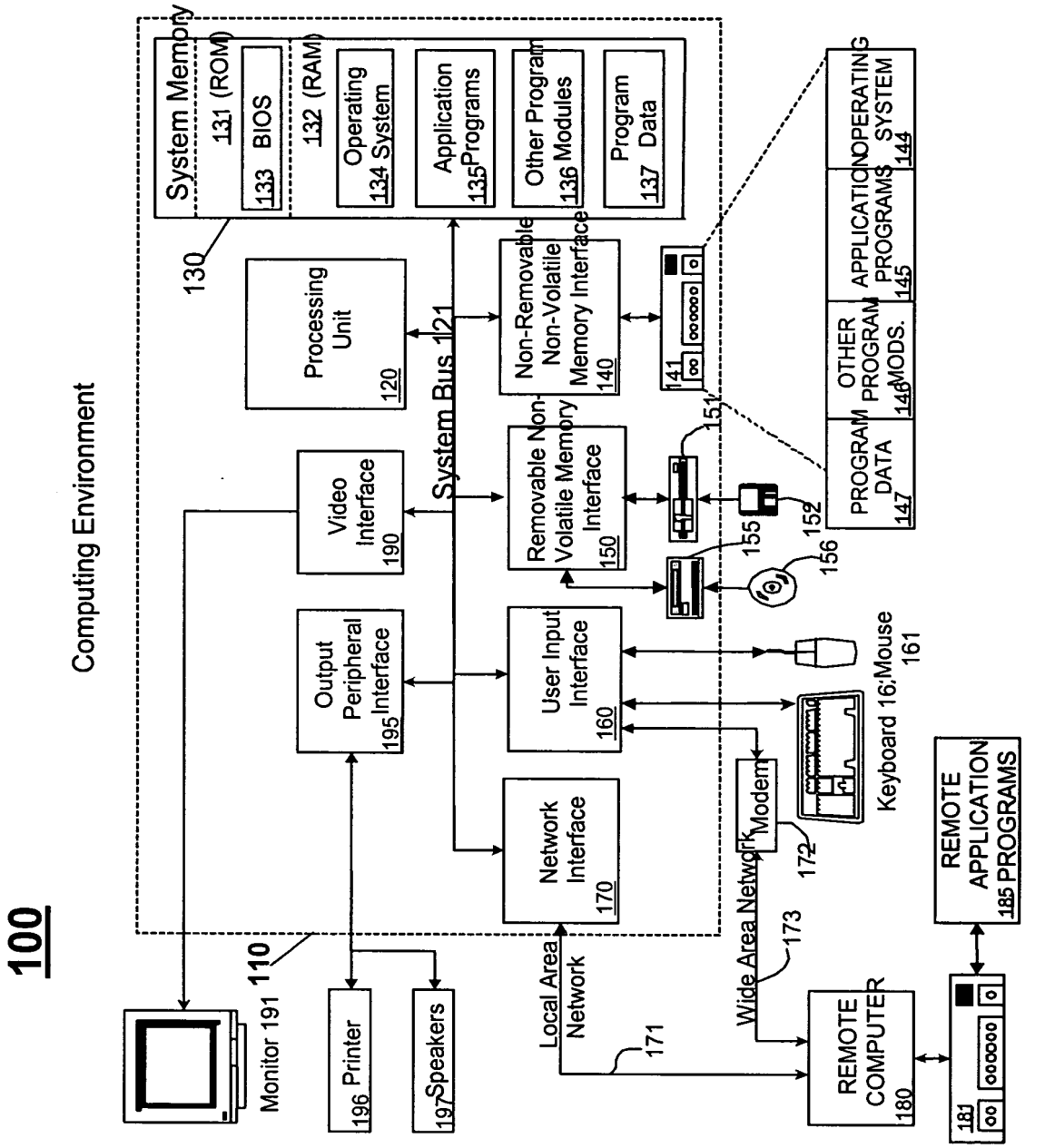

100
Computing Environment
System Memory
131 (ROM)
133 BIOS
132 (RAM)
Operating 134 System
Application 135 Programs
Other Program 136 Modules
Program 137 Data
130
Processing Unit 120
System Bus 121
Non-Removable Non-Volatile Memory Interface 140
141
151
OPERATING SYSTEM 144
APPLICATION PROGRAMS 145
OTHER PROGRAM MODS. 146
PROGRAM DATA 147
Video Interface 190
Removable Non-Volatile Memory Interface 150
155
152
156
Output Peripheral Interface 195
User Input Interface 160
Mouse 161
Keyboard 162
Network Interface 170
Modem 172
Wide Area Network 173
REMOTE APPLICATION PROGRAMS 185
Local Area Network 171
REMOTE COMPUTER 180
181
110
Monitor 191
196 Printer
197 Speakers

FIGURE 1

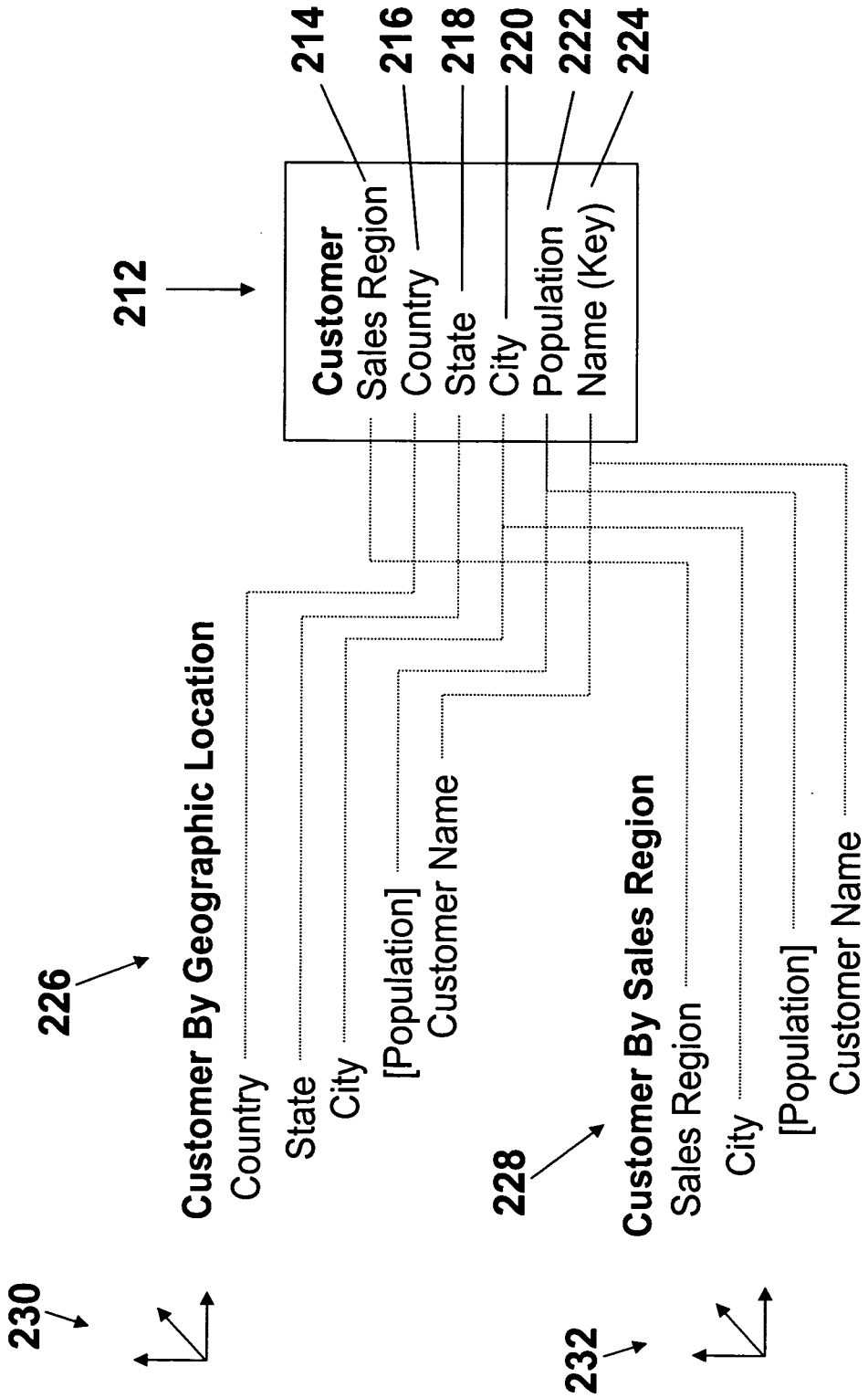

212
214
216
218
220
222
224
Customer
Sales Region
Country
State
City
Population
Name (Key)
226
Customer By Geographic Location
Country
State
City
[Population]
Customer Name
228
Customer By Sales Region
Sales Region
City
[Population]
Customer Name
230
232

FIGURE 2

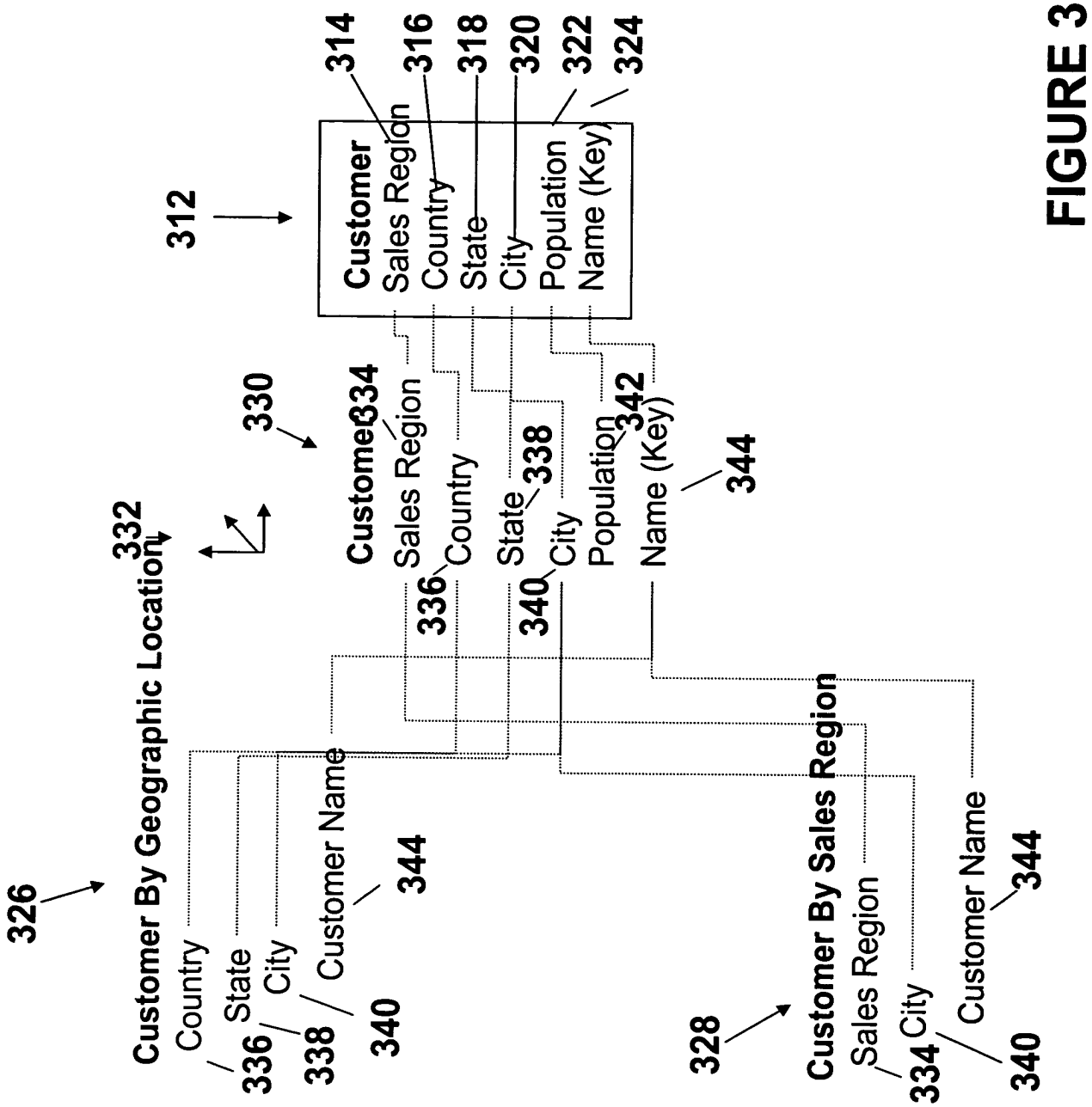
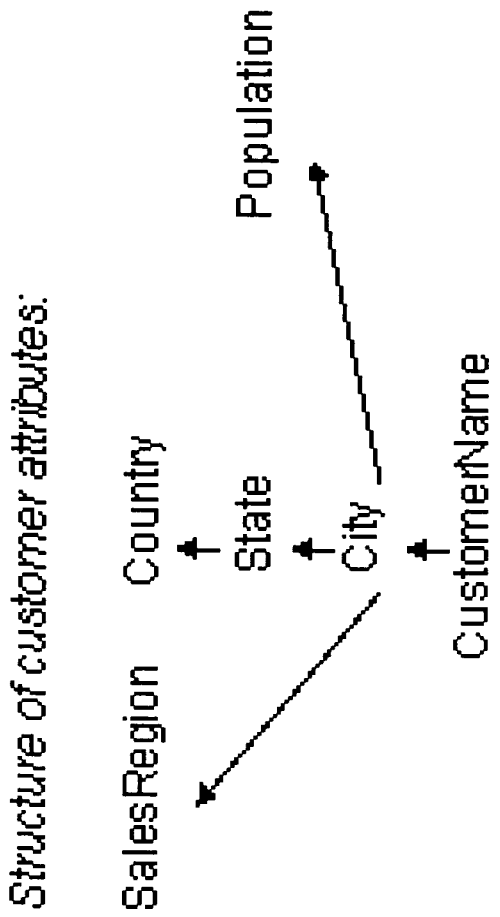

312
Customer
Sales Region
Country
State
City
Population
Name (Key)
314
316
318
320
322
324
330
Customer
Sales Region
Country
State
City
Population
Name (Key)
334
336
338
340
342
344
332
326
Customer By Geographic Location
Country
State
City
Customer Name
336
338
340
344
328
Customer By Sales Region
Sales Region
City
Customer Name
334
340
344

FIGURE 3

FIGURE 4


Structure of customer attributes:
SalesRegion
Country
State
City
Population
CustomerName

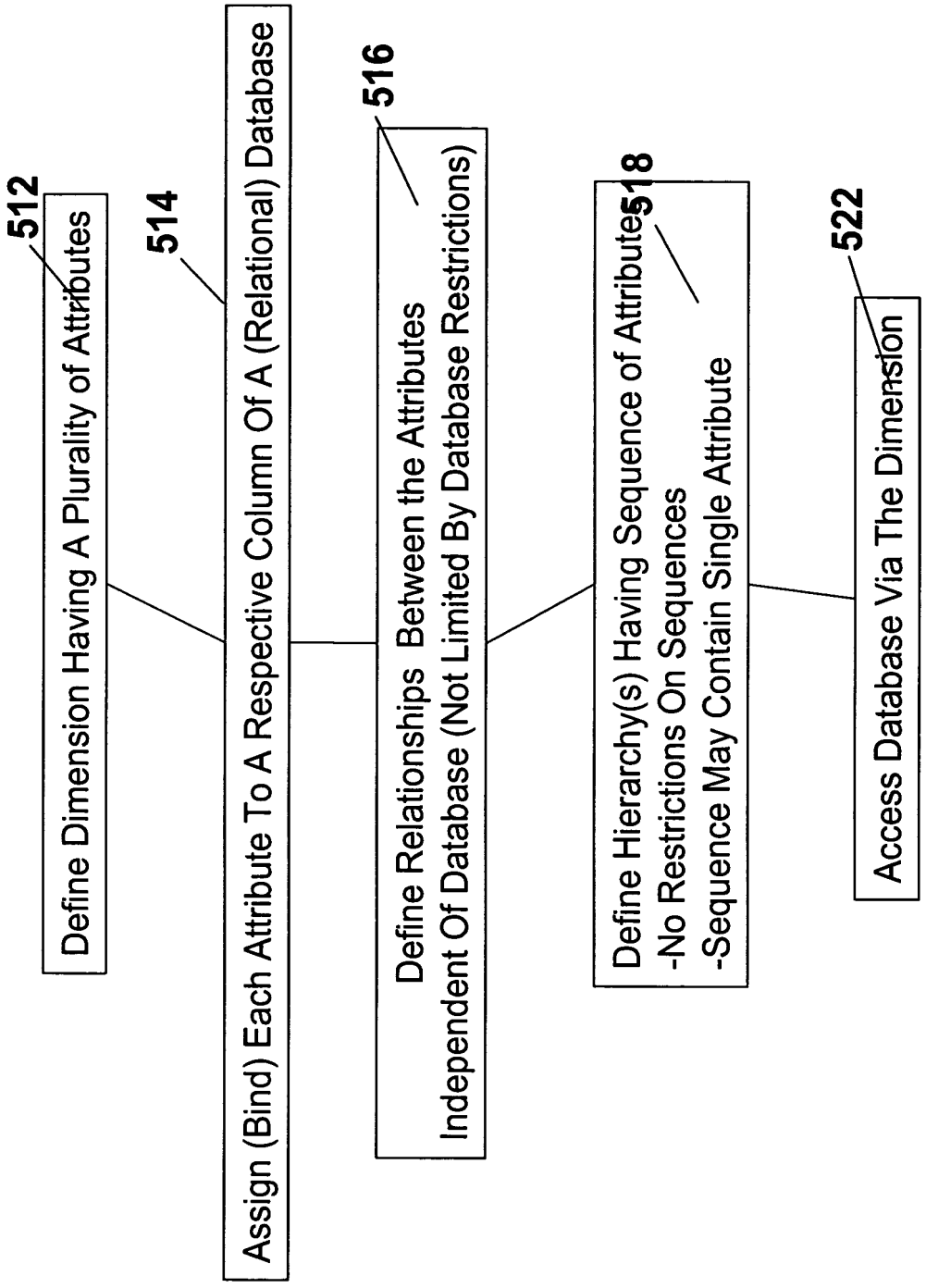

512
Define Dimension Having A Plurality of Attributes
514
Assign (Bind) Each Attribute To A Respective Column Of A (Relational) Database
516
Define Relationships Between the Attributes Independent Of Database (Not Limited By Database Restrictions)
518
Define Hierarchy(s) Having Sequence of Attributes
-No Restrictions On Sequences
-Sequence May Contain Single Attribute
522
Access Database Via The Dimension

FIGURE 5

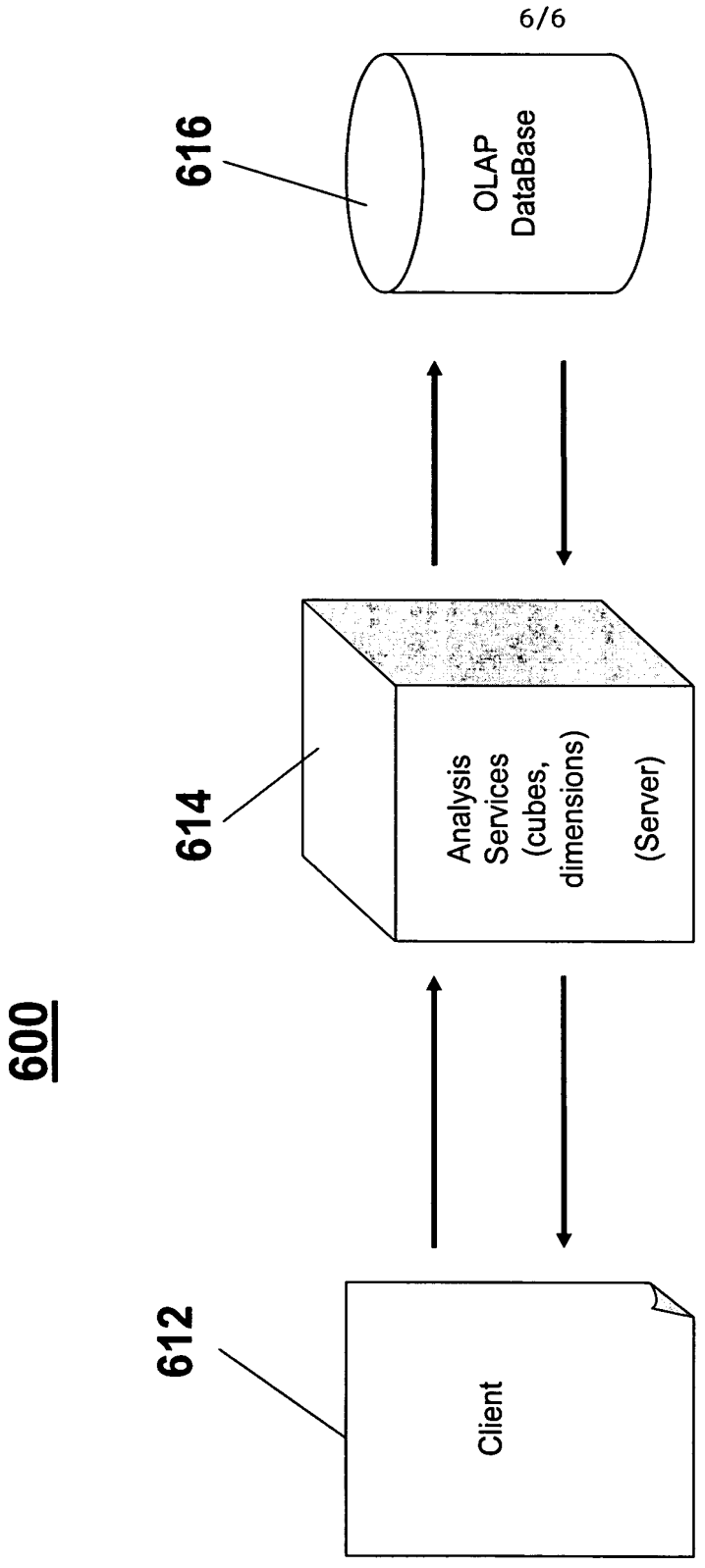

600
612
Client
614
Analysis Services (cubes, dimensions) (Server)
616
OLAP DataBase

FIGURE 6